

REMARKS

Claims 1-13 and 15-30 are pending in the present application. Claim 14 was canceled; and claims 3, 13 and 16 were amended. Reconsideration of the claims is respectfully requested.

Applicants' attorney and the Examiner discussed the application by phone on August 11, 2004. Applicants, through their attorney, express appreciation to the Examiner for granting this interview and for his helpful comments. A Statement of Substance of the Interview provided by Applicants is enclosed herewith.

I. 35 U.S.C. § 102, Anticipation

The examiner has rejected claims 13-16 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,327,526 to Nomura et al. This rejection is respectfully traversed.

In rejecting Claims 13 and 14 under 35 U.S.C. § 102, the Examiner states the following:

With respect to Claim 13, Nomura et al. discloses that the print job manager 5 generates a queue identifier of the excepted print job in accordance with the controlled data 100 and places the queue identifier at a selected position in a column (col. 4, lines 10-14), which reads on receiving a priority for a network print job; and sending the network print job in the priority to a network printing queue.

With respect to Claim 14, Nomura et al. disclose that the jobs are arranged in the order determined by the sort option designator 4 or by the operator's designation (col. 3, lines 43-44), which reads on the priority settings are entered by a network administrator.

Office Action dated May 19, 2004, page 2.

Applicants, in making their invention, were concerned with a situation encountered by individual network users of printers, namely, that the printer users frequently need to change their printing priorities. This concern is stressed in the present application, such as at page 2, lines 11-16 and page 2, lines 24-27. Thus, an important purpose of Applicants in making their invention is to empower network users, that is, the network clients who submit print job requests, to

determine the priority of how and when print jobs are printed. A further purpose is to enable the printer users themselves to change printing priorities, as circumstances rapidly evolve. In accordance with these purposes, Applicants have amended Claim 13 by incorporating limitations there into from previous Claim 14, now canceled. Claim 13 as now amended reads as follows:

13. (Currently Amended) A method for managing printing priorities in a computer network, comprising:
receiving a priority for a network print job, wherein the priority for the network print job is set by a network printer user who has submitted said print job; and
sending the network print job and the priority to a network printing queue.

Amended Claim 13 is considered to distinguish over the Nomura et al. reference, particularly in reciting, in the over-all combination of Claim 13, the step of receiving a priority for a network print job, wherein the priority for the network print job is set by a network printer user who has submitted said print job (emphasis added).

It is clear from Applicants' specification, such as at page 1, lines 12-21 and page 2, lines 11-16 that the term "network user", as used in the application, refers only to network users of printers, i.e., to network clients who require access to a printing resource or printer, and who submit respective print jobs to the print control system over the network. The specification, at page 2; lines 11-16 states:

The work performed by individual network users often changes in priority. Therefore users may wish to change their printing priorities accordingly and should be able to request a desired level of priority for their submitted print jobs.

The application, at page 2, lines 16-19 states:

there should also be some central control on the part of a network administrator, who would be in a better position to evaluate the total demand placed on the network's printing resources.

Thus, the term “network administrator”, in contrast to “network user”, refers to one who has, or is intended to have, some central control over a network’s printing resources.

Applicants’ specification, such as at page 10, lines 9-11, teaches explicitly that network users themselves, rather than network administrators, can establish print priorities in at least some embodiments of Applicants’ invention. As stated therein: “In one embodiment of the present invention, the print priorities can be established in whole or in part by the network users themselves”.

In rejecting Claims 13 and 14, the Examiner cited passages in Nomura at column 4, lines 10-14, and column 3, lines 43-44. The passage in column 4 discusses some components of the print job control system of Nomura, such as print job manager 5. At column 3, lines 43-46, Nomura states:

The jobs are arranged in the order determined by the sort option designator 4 or by the operator’s designation or by the manipulation of priority values.

From this teaching of Nomura, it is clear that the only person allowed to determine print job priority in the Nomura arrangement is the operator thereof. The first reference to the operator in Nomura is at col. 1, lines 41-44, wherein it is stated that:

Prior print job control systems have the capability of automatically changing the order of queue identifiers in the print queue table in accordance with the specific sort option designated by the operator. (Emphasis added).

This passage clearly demonstrates that the term “operator” is specifically used in Nomura to refer to a system operator, that is, a person who is closely involved in the operation of a print job control system. This definition of “operator” is consistent with the usage of such term throughout the Nomura disclosure. Thus, it is abundantly clear that neither in any of the Nomura passages cited above, nor anywhere else therein, does the Nomura reference teach or suggest that priority for a print job should be set by the network printer user who has submitted the print job, as now recited by Applicants’ Claim 13.

Applicants have considered other references cited by the Examiner, including U.S. Patent No. 6,227,531 (Guerrero et al.), U.S. Patent No. 6,130,757 (Yoshida et al.), U.S. Patent No. 5,787,237 (Riley), and U.S. Patent No. 6,504,621 (Salgado). However, Applicants believe that none of these references, either alone or in any combination with one another or the Nomura reference, overcomes the deficiencies of Nomura discussed above in connection with Applicants' Claim 13.

Claims 15-20 respectively depend from independent Claim 13, and are each considered to distinguish over the art for the same reasons given in support thereof.

In addition, Claim 16 is considered to distinguish over the art in reciting that changes to the priority settings are made by a network printer user who has submitted the print job. This feature of Claim 16 is emphasized in Applicants' specification, such as at page 10, lines 25-28. Applicants consider that neither Nomura nor any other cited reference, nor any combination thereof, shows or suggests this feature of Claim 16.

Therefore, the rejection of claims 13 and 15-16 under 35 U.S.C. § 102 has been overcome.

II. 35 U.S.C. § 103, Obviousness

The Examiner has rejected claims 1-12 and 17-30 under 35 U.S.C. § 103, as being unpatentable over Nomura et al. in various combinations with Yoshida et al., Guerrero et al., and Reilly and Salgado. This rejection is respectfully traversed.

Claim 1 of the present application reads as follows:

1. (Original) A method for managing printing priorities in a computer network, comprising:
 - entering priority settings for network print jobs;
 - receiving a new print job and an associated priority setting into a network printing queue;
 - comparing the priority setting of the new print job to a priority of other print jobs in the network printing queue; and
 - allowing the new print job to begin printing without delay if it has the highest priority in the network printing queue.

In rejecting Applicants' Claim 1, Examiner stated:

Nomura et al. discloses a print job control system that is linked to a local area network (LAN) or other communications information networks for efficient processing of print requests generated from a plurality of workstations (col. 1, lines 11-15), which reads on entering priority settings for network print jobs;

the print job manager 5 generates a queue identifier of the accepted print job in accordance with the control data 100 and places the queue identifier at a selected position in a column (col. 4, lines 10-14), which reads on receiving a new print job and an associated priority setting into a network printing queue; and

as shown in FIG. 6, the print job manager 5 has a printing order checker 7 which checks the printing order in accordance with the sort option (col. 5, lines 65-68), which reads on comparing the priority setting of the new print job to a priority of other print jobs in the network printing queue. Nomura et al. does not disclose expressly allowing the new print job to begin printing without delay if it has the highest priority in the network printing queue. Yoshida et al. discloses that the priorities are automatically assigned to the jobs each time a job is requested, and a job having the highest priority is executed immediately (col. 3, lines 8-10). Nomura et al. and Yoshida et al. are analogous art because they are from the similar problem solving area of interrupting print jobs. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the feature of Yoshida et al. to Nomura et al. in order to obtain a method capable of interrupting a print job. The motivation for doing so would be to expedite a print job in a queue.

Office Action dated May 19, 2004, pages 3-4.

In the above statement, the Examiner acknowledges that the Nomura reference does not disclose the Claim 1 step of allowing a new print job to begin printing without delay if it has the highest priority in the network printing queue. Accordingly, the Examiner cites the Yoshida reference for this step, in combining references under 35 U.S.C. § 103.

As is very well known, references may not be combined under 35 U.S.C. § 103, unless the prior art teaches some reason or motivation for making the combination, MPEP 2143. Moreover, the entire teaching of each prior art reference must be considered in its entirety. MPEP 2141.02.

The Nomura et al. reference emphasizes repeatedly that a central concern of its invention is a problem associated with lower-priority print jobs. More specifically, at column 6, lines 36-38 Nomura states "A lower-priority print job in the print queue table 6 will never be executed for printout as long as the print job having a higher priority value is honored". This concern of Nomura for lower-priority print jobs is reiterated, such as at column 2, lines 21-25. Therein, it is stated that a problem occurs "since a print job that is located toward the end of the print queue table will never be executed as long as a higher-priority print request is accepted". Accordingly, a principal object of Nomura et al., as set forth in its Summary of the Invention section, column 2, lines 35-40, is to solve this problem by providing "means for enabling a lower-priority print job to be accomplished at an appropriate time, thereby circumventing a possibly unlimited delay in the execution of that print job". At column 6, lines 38-41, Nomura teaches a specific means to avoid this problem, by including a priority calculator 10 in the print job manager 5.

In the Yoshida et al. reference, at column 3, lines 8-10, the passage cited by the Examiner in rejecting Claim 1, states explicitly that "the priorities are automatically assigned to the jobs each time a job is requested, and a job having the highest priority is executed immediately".

Applicants consider that this statement of Yoshida clearly teaches away from the objects and purposes discussed above in regard to the Nomura reference. While Nomura repeatedly emphasizes the importance of giving consideration to the needs of lower-priority print jobs, the cited passage from Yoshida stresses that high-priority jobs are always to be executed immediately. The cited teaching of Yoshida thereby directs away from making adjustments to allow execution of lower-priority jobs, and is thus considered to be incompatible with key teachings of the Nomura reference. In view of this incompatibility, one of skill in the art would not be motivated to combine the cited teaching of Yoshida with teachings of Nomura et al., in order to realize Applicants' Claim 1.

Independent Claims 21 and 26 respectively recite patentable features similar to those recited by Claim 1, and are thus considered to patentably distinguish over the prior art for the same reasons given in support thereof.

Claims 2-12, 22-25 and 27-30 depend from independent Claims 1, 21 and 26, respectively, and are each considered to patentably distinguish over the prior art for the same reasons given in support thereof.

Claim 3, as amended, is considered to further distinguish over the prior art in reciting the feature that priority settings are entered by a network printer who has submitted the print job. Accordingly, Applicants consider that Claim 3 patentably distinguishes over the cited art for the same reasons given above in support for Claim 13.

Claim 9 is considered to further distinguish over the art in reciting that changes to the priority settings are made by a network printer user who has submitted the print job. Thus, Claim 9 distinguishes over the cited art for the same reasons given above in support for Claim 16.

Claims 11 and 20 are respectively considered to further distinguish over the art in reciting the feature of using prompts at set time intervals to update estimated time for completing a print job. In the Office Action, these claims were rejected in view of the Reilly reference, at col. 8, lines 31-33. This passage of Reilly reads as follows:

Print queue 82 may be accessed and displayed by any of the host computers 400..., connected to the network at any time.

Applicants consider that this passage of Reilly provides no teaching in regard to sending or receiving prompts at set time intervals updating estimated time for print job completion. Accordingly, such passage would not disclose or suggest the feature of Claims 11 and 20 to one of skill in the art.

Therefore, the rejection of claims 1-12 and 17-30 under 35 U.S.C. § 103 has been overcome.

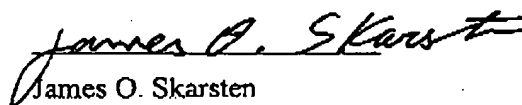
III. Conclusion

It is respectfully urged that the subject application is patentable over the respective cited references and any combination thereof and is now in condition for allowance. Accordingly, Applicants respectively request consideration and allowance of the currently pending claims.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,



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